

RESEARCH UPTAKE & IMPACT GUIDELINES

Stakeholder engagement, pathway to impact and evidencing impact

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Foreword

We would like to express our gratitude to all the Member States representatives for their invaluable contribution towards the development of the Regional Research Uptake Guidelines. Staff at SADC Secretariat and MIET Africa deserve our sincere thanks for their inputs since the beginning of this project. We are thankful to all the other stakeholders who participated in this process. A special word of thanks also to the consultants for finalizing the Draft document, including staff from the Human Sciences Research Council of South Africa.

1. Introduction – Setting the Scene

This report is directly tied to the science, technology, and innovation (STI) agenda (Mugwagwa et al., 2022) to meet the aspirations of African countries towards accelerating industrialisation and achieving rapid economic growth, with a view to uplift citizens' livelihoods. The imperatives to improve have become more pressing considering the economic and social challenges brought about by the COVID-19 global pandemic that have now been exacerbated by the recent geopolitical turmoil. These factors have put in sharp focus the need for Africa to pursue its own model of industrialisation and sustainable economic development, albeit aligned to the United Nations Sustainable Development Goals (SDGs), that would enable it to address the 'grand challenges' of health and wellbeing, energy, climate change, food security, inequality, poverty, and financial stability. Arguably central to "The African We Want" vision (African Union Agenda 2063) is the funding and development of continental and regional research and innovation capacities through universities, research institutes and private sector institutions. While Mugwagwa et al., (2022) provide a detailed review of the different research and innovation initiatives and financial commitments thereof, they also highlight the many limits (infrastructural, financial and human resource) to the development of a sustainable, locally led, research base (also refer to Ngongalah et al, 2019; Woldegiyorgis, 2020).

Even if there is cautious optimism (amidst unbridled enthusiasm) with regards to the deployment of different research and innovation funding initiatives together with the establishment of appropriate governance and oversight mechanisms (Mugwagwa et al., 2022), a key assumption is that the outputs of such research (typically in the form of scholarly publications e.g. journal articles, books, book chapters, conference proceedings, monographs) are 'ready-made' in terms of explicit societal relevance, clear policy implications and/or pragmatic business/economic application and that there are no barriers to access for stakeholders and academics like. Yet, there is long-standing evidence suggesting that research publications are primarily read within their respective academic networks (Mohammadi et al., 2015; Nath et al., 2020), leading to a disconnect between science, policy and practice (Koranteng, 2022). Thus, a 'circularity' (researchers reading and cross-citing other researchers) predominates despite various efforts by publishers and other intermediaries (e.g., funding agencies, academic institutions) to reach out to non-academic readerships[1]. In parallel, there is much work considering the broader societal impact when research is shared, and engaged with, more widely on social media platforms (Bornmann, 2014; Sugimoto et al., 2017) and evaluated using

[1] Understandably, the reason underlying this fixation on academic readership is that citations remain a key measure of the 'reach' of a research output which, in turn, contributes to metrics of 'quality', 'esteem' and 'reputation' for the authors as well as for their affiliated funders and academic institutions.

altmetrics[2]; a ubiquitous phenomenon during the pandemic and the fast-track' dissemination of COVID-19 related research (Kousha and Thelwall, 2020; Htoo et al., 2023). Finally, there is a global debate about the limits of the current academic publishing model and the need to shift to immediate and free open access policies for published outputs, particularly when research and academics are publicly funded[3]; thereby ensuring research is widely accessible.

Although commendable and largely effective in broadening dissemination channels and prompting awareness amongst non-academic audiences, these developments do not sufficiently (and holistically) address the dynamics and processes of **research uptake** and **research impact.** As Koranteng (2022) aptly summarises, a conceptual shift is needed from doing research *for* society to doing research *with* society. **Research uptake** considers the extent to which research users can access, analyse, and rely on research in a variety of contexts and decisions, and have the opportunity and ability to interact with the research community. Equally, uptake implies that researchers need to be able to embed research questions and problems that are of social, economic, and/or cultural relevance (as expressed by stakeholders) and to disseminate their work in a way that can communicate their insights/implications to a 'non-academic' audience, and eventually lead to change (DFID, 2016). In turn, engaging intentionally and strategically with research uptake is expected to lead to **research impact**, which is typically defined as the *"demonstrable contribution that excellent research makes to society and the economy"* (UK Economic and Social Research, 2022). Although contribution is academic in nature (i.e., shifting the boundaries of knowledge, advancing methods and theory[4]), the emphasis of the impact agenda (Browne et al., 2018) is on the economy and society (e.g., culture, arts, language) and the benefits research can bring to individuals, organisations, countries, and regional/international agencies. Admittedly, evidencing impact as an endpoint is often a challenge given the time it may take for a demonstrable contribution to emerge and be assessed as such from a qualitative and/or quantitative perspective (e.g., improved livelihoods for marginalised communities; broadening or diversifying the cultural landscape; new knowledge leading to more organisational efficiencies).

What thus becomes more relevant and pragmatic within these guidelines is the development of **a pathway to impact** i.e., *what are the conscious steps and*

[2] Alternative metrics (called *altmetrics* to distinguish them from bibliometrics) aim to assess the societal impact of research outputs by relying primarily on social media related metrics, such as views, downloads, clicks, notes, saves, tweets, shares, likes, trackbacks, discussions, bookmarks, and comments.

[3] For example, refer to the 'Plan S' initiative - https://www.coalition-s.org/.

[4] Within this definition, 'blue sky' and humanities/social science research is often perceived as 'losing out' due to the (perceived) lack of a demonstrable contribution. However, there has been a significant re-framing of the impact agenda to address such exclusion. To this extent, even 'blue-sky' research has research 'users' and relevant stakeholders.

plans one needs to make with the relevant stakeholders to ensure the generation of demonstrable impact? In this way, research uptake is not merely conceived as an abstract set of communication and engagement activities that would be 'nice to have/do' but one that would be executed in the context of a conscious strategy of teasing out potential pathways to impact. This does not mean that all research uptake activities will be successful or meaningful towards a pathway to impact but at the very least, the conditions (e.g., institutional structures and resources, communicating channels/strategies, academic capacity) are present for potential impact generation.

2. Framework Underpinning the Guidelines

It is proposed that these guidelines build on the inter-related notions of research uptake and pathway to impact. The guidelines and overarching framework are adapted from various sources, from African settings and beyond (notably National University of Science & Technology, Zimbabwe; UK Department for International Development; Overseas Development Institute, ODI; African Cities Research Consortium). One can conceive that a researcher or research team typically initiates and completes a research output in response to a perceived problem and/or to prior research. Rather than consider the research questions, design and output(s) in isolation, there is scope in adding elements of research uptake with a view to broaden the applicability and relevance of the conceptual and empirical insights. Assuming that sufficient 'progress' has been observed from the uptake stage, there would then be opportunities to articulate a pathway to impact approach requiring more specific strategic interventions (including co-production, evidence gathering, engagement and monitoring outputs/outcomes). This not only requires skills at the academic researcher/research team level but also at the institutional research management levels.

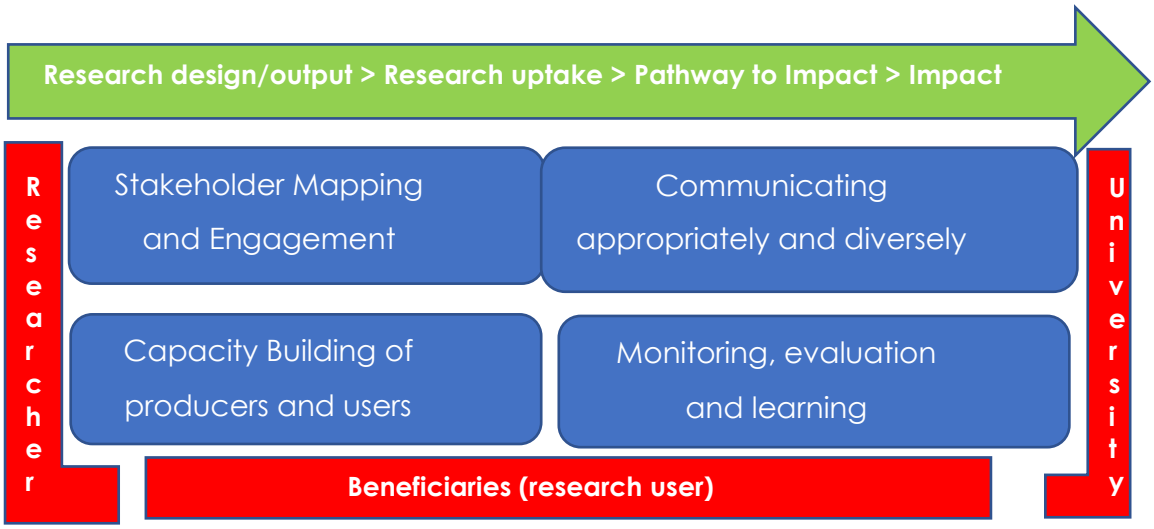

Figure 1: Framework for research uptake guidelines towards generating impact

Finally, one needs to consider that research uptake is heavily dependent on the motivations, interests, power, influence, and capacity of the beneficiary per se.

The more engaged the stakeholder, the more likely the uptake and the intention to progress to a pathway for impact. As set out in Figure 1, the four central elements of the framework outline the strategies/activities about:

(i) **stakeholder mapping and engagement**, involving all aspects of stakeholder identification, analysis, and interaction at all levels (consistently or occasionally), whether initiated at the beginning, middle or end of the research cycle.

(ii) **Communicating appropriately and diversely**, in terms of translating traditional research findings and outputs (journal articles, academic monographs) into multiple forms of dissemination underpinned by a communication strategy. Specifically, one needs to consider how to connect with 'hard to reach' communities and networks.

(iii) **capacity building** of the research team and of the institutional structures supporting research uptake and pathway to impact efforts, alongside the development of research users' capacity, not only to comment and evaluate outputs; but potentially in co-producing outputs (such as joint summary reports and joint response to consultations).

(iv) **Monitoring, evaluation and learning**, at the research team and institutional level, mainly in terms of (a) collating inputs/activities and outputs relating to research intake (stakeholder mapping/identification, capacity building, production of appropriate outputs for communication, funding schemes), and (b) developing research project logical frameworks for projects progressing onto a pathway to impact, and (c) learning and review stage to inform changes to the research uptake and pathway to impact strategies and processes.

It is acknowledged that these notions of uptake, pathways and impact remain rooted in Western thinking about how science and research inform (or ought to inform) change or reform. Many institutional structures and 'intermediaries' facilitating uptake and impact may also be less developed or absent in Africa. Over time, however, it is expected that the intentional foregrounding of African science would result in the emergence of African modalities, perspectives, frameworks and practices on uptake and impact, with due consideration of postcolonial and social justice approaches. For example, there is a duty of patience and humility from knowledge producers as they listen to and learn (i.e., their needs, concerns, and intention) from people and communities. Relatedly, research impact is a result of knowledge exchange process that requires us "to learn new ways of producing, co-producing and sharing our knowledge" (Reed, 2018, p. 7) rather than merely await it to be consumed by selected constituencies. Another important consideration is language, in that although the English language tends to dominate (globally) the scholarly research publication landscape, uptake and pathway to impact strategies need to embed local and

national language/dialects to be effective. This is not only a matter of translating the text but also about appreciating the contexts in which it will be read and relied upon. For example, there are challenges associated to the use of technical jargon and where institutional structures are different from the context in which the research was designed or produced (e.g., African Francophone or Lusophone countries).

The detailed guidelines in relation to each of the above elements are now provided, with an emphasis on national, institutional, and individual level activities/inputs towards enhancing research uptake and a pathway to impact. These guidelines follow a logical sequence of events under ideal circumstances whereby impact design would be collaboratively undertaken with the relevant stakeholders to ensure that research uptake and use is not left to chance but is designed into a given research project/programme. For this reason, the guidelines begin with stakeholder mapping and engagement, albeit that it is also common for this process to happen downstream.

3. Detailed Research Uptake and Pathway to Impact Guidelines

3.1. Stakeholder Mapping and Engagement

A stakeholder mapping and engagement is a crucial part of a successful research uptake and pathway to impact plan. Stakeholder identification is undoubtedly the first step. In addition to the research community (academics, PhD students), typical 'non-academic' stakeholders would be government institutions and officials, donors, international/regional bodies/agencies, media, practitioners, 'thought leadership' organisations (think tanks, professional organisations, apex associations/federations), community organisations (place-based, activist/advocacy, issue-based, pressure groups), intermediaries (e.g. social media influencers; consultants), trade unions, political parties, companies and businesses, and the general public (but often identified from a particular perspective, e.g. consumers, voters, taxpayers, beneficiaries of local public services such as education, health, and transport). One should also consider that the natural environment (non-human beneficiaries), reflected for instance in terms of natural settings and places, flora and fauna, air quality, biodiversity, is also a stakeholder albeit that their 'voice' may be indirectly expressed by individuals and organisations.

These stakeholders can be part of the process of generating and supporting the initiation of research and/or they can purely be beneficiaries and users. Therefore, **knowing who they are, their needs, interest and their influence on your research** is indispensable to achieving uptake and impact. Table 1 (below) provides a 'stakeholder/publics analysis template' to provide with a holistic understanding of those you may want to engage with, and help you prioritise the limited time and resources. Often there is an issue of timing that

may preclude you from relying on a stakeholder at a given moment (e.g., election cycle, change of organisational leadership) but the mapping allows you to document these concerns and plan when you might come back for an engagement. While it is easiest to think of "beneficiaries", this tool will also lead you to think about whether there might also be groups who may be disadvantaged or disparaged (implying ethical considerations and in which case, these guidelines should speak to or align with the approved SADC Research Ethics Guidelines); so that you can consider how to manage and reduce those negative impacts.

3.1.1 Who might (not) be interested?

The first question you need to ask is who might be interested in your research. They can be peripherally interested or they can be interested in just one aspect of your research (e.g., your method, theory, or some of your research findings). In some cases, you may want to identify groups that you think are not (currently) interested in your research, who you would like to be interested in, or who you think is important for other reasons (e.g., they may be particularly influential or impacted). Looking for a potential coincidence of interests can ensure that doors open or that emails are replied to.

An understanding of the extent of interest (and motivations thereof) by each stakeholder is quite important although this can be subjective. You will start to notice that different groups ‘in the room’ often have different interests (economic, political, ideological, reputational, altruistic), and if you understand these interests, you will be able to rely on this information to tailor your messages you embark on your impact pathway.

The second question is to consider if there are any groups or organisations who might have the power or authority to influence your ability to achieve uptake and impact indirectly. On one hand, there are those who can facilitate your impact (enablers) i.e., organisations or groups who want to achieve similar benefits as those you have planned in your research. For example, professional (or trade) associations can help you reach out to many practitioners through affiliation/memberships and are often keen to demonstrate how their membership fees can deliver ‘value for money’ through a sharing of research insights. Federation-level organisations (umbrella bodies; ‘associations of associations’; regional or international agencies) are also ideal in terms of enabling access to a larger constituency of individuals and organisations with relatively less time and effort.

On other hand, there are those who can frustrate your impact (hinderer) i.e. organisations whose interests are compromised or harmed by your work, whether in practical, economic, or cultural/ideological terms. It is important for both pragmatic and moral reasons to engage early with these groups to ensure

you remove or minimise, negative unintended impacts. In a particular ecosystem of “research uptake”, it is important to present yourself as an objective voice that is not driven by vested interests, even if you have a personal preferred view. Constituting a ‘broad church’ of stakeholders is more constructive in the longer term. Using the provided table, their relative influence, can be rated high, medium, or low. Again, the key is to understand the nature of their influence. The ratings are subjective but should stimulate you reflect more deeply.

Your final task is to use the information you have collected to prioritise who you will reach out to first, using for instance a stakeholder matrix (power/influence or stakeholders on one scale vs. interest by stakeholders on another scale). Ideally, you would have gathered sufficient objective information/data about these aspects but in truth, this is quite difficult to gauge (e.g., do certain organisations frequently post social media or public statements about issues relating to your research). At the same time, the stakeholder matrix does reinforce the marginalisation of stakeholders with high interest and benefit but little influence. The final column of the template helps you identify individuals, groups or organisations who have low interest but high influence and/or benefit as hard-to-reach groups that may require special attention.

In effect, there are two types of hard-to-reach groups. First, there are the gatekeepers who have enormous influence to facilitate or block your impact, but who have limited interest in your research. As a result, they may not return your emails or calls, and it is tempting to ignore them because they are so hard to reach. Second there are the marginalised who have little influence to either facilitate or block your impact, and who may have limited interest in your research, but who could benefit more than anyone else if you could design and orient our work towards their needs.

3.1.2. Act now.

To the extent that the process is always a speculative one, it is important that you choose your top three-four stakeholders and devise a plan to reach out to them. Conceivably, there is no time to reach out to everyone (except when using generic communications) and using a tool to prioritise who you reach out to first ensures you manage the time/resources available to you.

At this stage, one should avoid blanket emails. Each of your top three-four public organisations or stakeholders will get an email tailored to their interests and priorities, because you know what they're interested in and how your research might be able to help, based on this analysis. You are opening a channel of empathy and collaboration based on your analysis, identifying the things that you can most effectively help them with. The result is that you will get responses to your emails, and in most cases, you will get a "yes" to the suggestion to meet up or discuss how you might be able to work together. Bear in mind that there may

be different (or more than one) role holders responsible for engaging with academics/researchers and it may be better to err on the side of caution and contact all of them. An added approach would be to respond to the organisations' call for responses/consultations and therefore keeping abreast of their own campaigns and communication is very important.

Table 1:Stakeholder and relevant publics analysis template

Name of organisation, group or segment of the public	Likely interested in your research? H/M/L	What aspects of your research are they likely to be interested in (or why are they likely not interested)?	What level of influence might they have on your capacity to generate impact (to facilitate or hinder) and/or what level of impact (positive or negative) might they derive from the research? H/M/L	Comments on level of influence (to facilitate or hinder impact) and/or likely impact (positive or negative) e.g., times or contexts in which they have more/less influence over the outcomes of your research, ways they might block, hinder or facilitate your research or impact, types of benefit they might derive from the research)	If influence is high but interest is low, how might you motivate greater interest and engagement with the research?

3.1.3 Stakeholder engagement

The following supplement, and is a sequential step, to the stakeholder identification mapping/publics analysis guidelines outlined earlier[5]. The relational approach to impact argues that research uptake, pathway to impact and consequently impact is a function of productive and long-lasting relationships with the would-be users of the research you undertake. These include promoting links between science and society, gaining access to additional information or resources, and improving the relevance or utility of the research to users and beneficiaries. Additionally, engagement can lead to learning and empowerment. By engaging with researchers, stakeholders can learn and assist in the generation of new knowledge (e.g., social learning, knowledge exchange)[i], and maybe empowered to become involved in future research[ii].

There presently is no shortage of Handbooks, peer reviews research, blogs and organisations that offer skills, guidelines and training on stakeholder engagement. After studying a lot of these resources, the BiodivERsA Stakeholder Engagement Handbook (2014) seemed quite relevant. BiodivERsA is a network of national funding organisations promoting pan-European research that offers innovative opportunities for the conservation and sustainable management of biodiversity and ecosystem services.

For ease of reading, the BiodivERsA Stakeholder Engagement Handbook (2014) is not mentioned in detail and some sentences were edited for relevance and meaning specific to the purpose of this document. Many open-source references are provided as endnotes at the end of the document. These references are also intended to be a resource not only for those who wish to consult the original research that the Handbook draws from but also in the writing of grant proposals or any other research activities that require a justification for stakeholder engagement. Additional references that are not included in the BiodivERsA Handbook are provided. Even with all this, the guideline outlined below is by no means exhaustive as there are several other principles, practices and methods that are not included here for sake of brevity.

Furthermore, by considering local knowledge in the research process, it becomes possible to anticipate and improve unexpected negative outcomes before they occur[iii]. Well managed engagements can also facilitate learning and trust between participants and help mediate conflicts[iv]. Establishing the reason(s) for engagement is a critical first step before any engagement is undertaken. Existing literature suggests that the benefits of engagement can far outweigh the risks, including those risks posed by lack of engagement[v].

[5] The guidelines also draw their rationale from the salience placed on stakeholder engagement in the 'Impact by Design' document prepared for the Knowledge Hub earlier this year

3.1.4. Challenges with stakeholder mapping and engagement: Possible ways forward

Although there is strong evidence that effective stakeholder engagement can bring many benefits to the research process, it is important to approach engagement critically and to be aware of some of the challenges and limitations that may emerge. For example, engagement increases costs for both the research project/team and the stakeholders in the short term. Engagement might also make the undertaking of the project more complicated and bureaucratic; whereas the useful outcomes can be long term or seem intangible and remote. Some scientists may see the involvement of stakeholders as a constraint instead of an opportunity[vi], and some stakeholders may lack the time to engage or experience 'stakeholder fatigue' - that is, they begin to feel overloaded with engagement activities, which negatively affects willingness to participate and lessens the quality of their input.

In addition, unbalanced engagement can lead to perverse or poor decisions if it inadvertently reinforces existing privileges, or where group dynamics discourage minority perspectives[vii] or engaging with other groups. Ethical considerations include intellectual property rights (IPR), which need to be discussed and agreed upon to ensure stakeholders are clear about the implications of their involvement, especially if they are data suppliers. The majority of barriers to engagement can be overcome with effective design, good facilitation and institutional support.[viii] Table 2 provides an overview of key challenges and limitations associated with stakeholder engagement, with a brief list of ways these could be avoided or overcome.

Table 2: Ways of overcoming stakeholder engagement challenges and limitations

	Challenges and Limitations	***Ways to avoid or overcome***
1	**Stakeholder Fatigue**[ix]: may occur where many stakeholder engagement initiatives have taken place in the past, especially in circumstances where they did not lead to tangible outcomes for stakeholders. This may result in limited engagement with research.	Where possible, avoid working with communities suffering from stakeholder fatigue. Where this is not possible, ensure there will be earlier benefits ('quick wins') for stakeholders from engaging with your research and work with opinion leaders to persuade others that it is important to engage with the project.
2	**Biased Representation of Stakeholders or Stakeholders missing**[x]: this may lead to some	Conduct a systematic stakeholder analysis to identify and prioritise those who should be engaged. Consider who might have the most influence, but do not

	Challenges and Limitations	*Ways to avoid or overcome*
	stakeholders raising questions over the legitimacy of outcomes by some stakeholders.	neglect those stakeholders with significant interest in your research, who may be powerless or marginalised. Consult widely within the stakeholder community to ensure crucial voices are not being ignored.
3	**Power Imbalances with Stakeholder Engagement Activities**[xi]: may lead to dominance by particular individuals and agendas, at the expense of others, whose ideas are not heard, making them feel marginalised, and potentially leading to or exacerbating conflict.	Carefully design stakeholder engagement activities with a professional facilitator, Consider: parallel activities for groups in conflict or with significant differences in power; and facilitation methods that enable all participants to provide and comment on ideas (possibly anonymously). Use of online/digital events to address budget and cost constraints involving physical travel.
4	**Short-term Engagement**[xii]: stakeholder engagement often lasts only for the duration of funded projects, making it difficult to achieve impacts and deliver benefits expected by stakeholders. The key contacts may also leave the stakeholder organisation.	Identify local organisations that might have a long-term presence in your study area and plan the legacy of your research with them from the outset, giving them sufficient ownership of the research to continue investing in outcomes long after the research has ended. Find ways to fund ongoing engagement, even if very limited, to maintain relationships, and lay foundations for future research that could be funded.
5	**Unrealistic High Expectations**[xiii]: engagement can sometimes create unrealistically high expectations among stakeholders who engage early in the research process and discover their suggestions are not compatible with the scope of the research or are not funded.	Manage expectations carefully from the outset. If engaging with stakeholders during project development, make it clear that funding is uncertain; ensure you are engaging with those who have a strong interest in your research; identify which ideas the project team may be able to work with immediately, and update stakeholders as soon as possible with research plans to show which of their ideas have been integrated and why it was not possible to integrate all ideas. Co-

	Challenges and Limitations	*Ways to avoid or overcome*
		develop and agree a (written) plan of action and expected deliverables.

Finally, the outcome of the process can be reflected in a stakeholder planning template. Table 3 below is designed to enable researchers to bring together information on the role(s) the stakeholders will play, the timing of engagement activities, the method of engagement, and the level of engagement to be adopted. Note that stakeholders may, and often will, have multiple roles to play throughout a project.

It is important to recognise that the level of engagement depends partly on the chosen method of engagement and the stakeholder involved. Not every engagement activity needs to be at the level of engagement identified for a particular stakeholder. In some instances, engagement may be more frequent and conducted at different levels, particularly as the role a stakeholder may play can vary throughout the lifetime of the project. For example, a stakeholder may fall into the 'involve' category, but this level of engagement may only be necessary for the early stages of a project, whereas later, the same stakeholder may only need to be involved with activities that 'inform'.

It is important to ensure that the methods being adopted are realistic and appropriate for delivering the desired outcomes and that the proposed timing has been accepted by those who are planned to be involved. It should also be remembered that the location, timing, number of meetings, and methods employed can all have a great impact on the overall results and outcomes.

Table 3: Stakeholder engagement planning template

Project Timescale →	**Before**	**During**		**During / After**				**After**			
Roles of Stakeholders/ Areas of and of level influence/ How stakeholders	**Research strategy/ Research questions/ Project design**	**Networking**	**Advice/ Recommendations/ Project Revision**	**Prediction/ Modelling**	**Monitoring**	**Resource provision by stakeholders (equipment, data, money, contacts**	**Training**	**Data user/Recipient/ Beneficiary**	**Feedback**	**Communication and dissemination of results to stakeholders**	**Identify future research questions**
Stakeholders ↓	**Specific stakeholder activities**										
Government policymakers or advisors											
National/international policy makers/groups											
Non-government organisations											
Business/Private Sector											
General Public											

Local Community											
Users (e.g., practitioners, data users)											
Students											
Interpreters (e.g., science communicators, mediators, facilitators)											
Media											
Others											

Notes: Project timescale (top row) indicates the most likely stage at which each method would be applied. However, this is only a guide, as the timing may vary depending on the project.

3.1.5 Maintaining credibility, relevance and legitimacy during stakeholder engagement

For research to be considered valid and valuable, it has been recognised that it should be undertaken with credibility, relevance and legitimacy (referred to as 'CRELE')[xiv]. These three factors can be strengthened by appropriate engagement with stakeholders[xv]. There are examples of research projects in which stakeholder engagement failed to deliver intended outcomes, or led to unanticipated negative consequences, but benefits were still reported. In certain circumstances, stakeholder engagement can occur in a situation of conflict, which must be handled carefully and sensitively. Many scientists are not used to working in situations where conflicts between individuals and goals are present and may prefer to avoid them. However, in some instances conflict is to be expected and should be planned for in a positive, constructive way.

Table 4 hereunder offers guidelines on how to ensure credible, relevant and legitimate stakeholder engagement.

Table 4: Making stakeholder engagement credible, relevant and legitimate

CREDIBILITY	is the perceived quality and validity of the stakeholder engagement process and the people involved in the engagement[xvi]. To improve credibility, a stakeholder engagement process should have clear objectives, use the most appropriate people and methods, avoid exclusion of those with opposing views, and be transparent; the view that others have of the process is also important. Some continuity of those involved in stakeholder engagement exercises is also considered important to ensure that knowledge and skills are built upon and to maintain relationships and build trust.
RELEVANCE	*refers to the usefulness of the engagement process and its outcomes – how closely it relates to stakeholders' and researchers' needs, and how responsive the process is to changing needs. Research teams can enhance relevance by adapting language for different stakeholder groups, ensuring appropriate timing and outcomes of the engagement, and being adaptable to changing circumstances. Relevance can also be improved by identifying key stakeholders in the planning stages of the process and ensuring effective engagement and communication with them throughout. Relevance is key to motivating participation and ultimately having a real impact.*

CREDIBILITY	is the perceived quality and validity of the stakeholder engagement process and the people involved in the engagement[xvi]. To improve credibility, a stakeholder engagement process should have clear objectives, use the most appropriate people and methods, avoid exclusion of those with opposing views, and be transparent; the view that others have of the process is also important. Some continuity of those involved in stakeholder engagement exercises is also considered important to ensure that knowledge and skills are built upon and to maintain relationships and build trust.
LEGITIMACY	*is the perceived fairness and balance of the stakeholder engagement process, and is particularly important in cases where conflict may occur? A clearly stated, appropriate and agreed stakeholder engagement process, along with appropriate methods, can help manage conflict and dissent, and therefore enhance legitimacy[xvii]. In addition, stakeholders need to feel satisfied that their interests have appropriately been taken into account. The inclusion of a balanced group of multiple stakeholders can improve legitimacy, although care must be taken to ensure this legitimacy is not threatened if some of the stakeholders are viewed to be inappropriate by others in the group. Employing unbiased facilitators to help run engagement activities can also help.*
GETTING THE BALANCE	*Building these three factors into the stakeholder engagement process takes time, effort and resources, and it may not always be possible to enhance all aspects of CRELE. For example, linking with policymakers improves the relevance of the engagement process and its desired outcomes for some stakeholders, but may be perceived by others as affecting the legitimacy of the process[xviii].* *The most appropriate approach will be dependent on the individual project, and the desired outcomes of the engagement. However, early engagement is likely to make the engagement process more credible and relevant; and finding the right mix of participants and ensuring no groups have been excluded will enhance legitimacy and credibility.*

Before developing the matrix/template further, or sharing it with stakeholders, it is important to consider the practicalities of the engagement being proposed to establish if the plan is feasible. This should also involve consideration of the costs of the engagement, in terms of both time and money, as this will allow the

researcher(s) to identify any constraints. The following questions can help with considering practicalities, such as:

- Are the timeframes for each activity realistic, including preparation, reviewing and analysis?
- Who will be responsible for the engagement – are different people to be responsible for different parts of it?
- How much staff time will be required? Is this time available? What will it cost?
- What are the costs of using external expertise (if desired/required)? What are the administrative costs, including hiring venues, making phone calls, provision of documents, etc.?
- Are stakeholders to be reimbursed for their time? Are their expenses to be covered? Are there other costs associated with communication and publishing information, including recording and providing feedback to stakeholders?
- How might the local culture/customs affect or restrict the engagement process? What contingencies need to be included in case the engagement needs to change the process, and what might different options mean to overall time scales and costs?

Responses to these questions will most likely result in the need to update the engagement template. Once the practicalities have been considered, and the matrix has been revised where appropriate, it should be shared with stakeholders and funders, providing them with some clarity over what will be undertaken and when. The template should remain a flexible and adaptable document, which can be amended and updated as and when required.

Furthermore, bearing in mind the diverse nature of stakeholders and engagement thereof, methods used for stakeholder engagement depend upon objectives, the required level of engagement, the timing of when engagement activities are intended to take place, and the expected role of the stakeholder(s). Initial assessment with stakeholders of the desired outcomes from a project can help identify which methods are most likely to deliver these outcomes and achieve the purpose identified for the engagement process[xix]. All engagement methods have particular strengths and weaknesses; the key is to choose the right one(s) for the particular purpose and context. Methods should also be selected to meet the needs, capacity and expectations of the relevant stakeholders. More than one method is often desirable and several methods can be combined to achieve an aim.

The key to successful stakeholder engagement is to understand the broad range and types of methods being used, their intended purpose, and why one might be more suitable than another in a particular context and for a particular purpose[xx].

A wide range of techniques are available to facilitate effective two-way engagements between researchers and stakeholders, finer details of these techniques are listed below but broadly speaking these can be categorized as:

Opening out techniques – for opening up dialogue and gathering information with stakeholders about issues linked to research. This collection of techniques is particularly useful during the initial phases of a research project, either during the development of initial research questions before writing a funding proposal, or in the early phases of a funded project, where the research goals and programme of work are being adapted to fit the needs and interests of stakeholders better.

Exploring techniques – these can help evaluate and analyse preliminary findings with stakeholders. Given the length of most research projects, getting early feedback on preliminary findings can help keep stakeholders interested in the process and give them greater ownership over the eventual research outcomes. Feedback can also provide researchers with ideas about how to further refine their work, such as where assumptions are not clear or are questioned by stakeholders.

Deciding techniques – after issues have been opened up, explored, and analysed, it is often necessary to start closing down options and deciding upon actions based on research findings. Several techniques can engage researchers and stakeholders in decisions based on research findings, for example, prioritising particularly interesting or relevant findings for further research or action.

There are numerous sources of information on these techniques[6]. In conclusion to this theme on stakeholder mapping and engagement, Figure 2 below also provides three case study examples from BiodivERsA that embed some of the elements and challenges of stakeholder mapping and engagement.

[6] For example, refer to https://i2s.anu.edu.au/resources/stakeholder-engagement-methods and https://www.mindtools.com.

Figure 2 - Three case study examples

CASE STUDY 1

ALLOW TIME FOR SCOPING AND PILOT STUDIES

Good planning is fundamental to the success of stakeholder engagement activities and maintaining the positive perceptions of the engagement experience for stakeholders. Researchers of the BiodivERsA project committed considerable resources to scoping activities within focal Caribbean communities that depend on the health of coral reefs for their livelihoods, before beginning stakeholder engagement. The subsequent stakeholder activities were perceived to be successful and this is partly attributable to the investment in the scoping work. The following measures were taken:

- Avoiding potential stakeholder fatigue: stakeholders were informed of projects aims and asked if similar research has been conducted to avoid replication.
- Refining methodologies: a pilot project was run in one area to ensure approaches and questions were well received and understood by stakeholders.
- Raising awareness: community meetings were widely published using flyers and spreading the word verbally to ensure that the communities were well informed of the aims of the research project.
- Developing local contacts: researchers recruited local assistants who has a good knowledge of the local communities and local issues to assist with stakeholder engagement. Researchers who are viewed as 'outsiders' from another country may be viewed with distrust; developing relationships with local contact who are known and trusted can be a good way of overcoming this.

Some of the details of local case studies (e.g., study sites) were jointly decided with stakeholders to ensure the research was of interest and relevant to them.

CASE STUDY 2

PLAN HOW THE STAKEHOLDER ENGAGEMENT FITS WITHIN EXTERNAL AGENDAS AND POLICY

To increase the relevance of engagement activities for stakeholders and the likelihood of the results having an impact, it is necessary to understand the wider context in which the project fits. Understanding, for example, the current policy context and how the results will contribute to an evidence base that informs decision making will increase the interest of stakeholders in the project.

Results from a Dutch case study – part of the BiodivERsA CONNECT project – provided an analysis of the social values held by the general public for changes in and around a freshwater lake. A government-agent partner in the project communicated the findings for inclusion in a public consultation about local planning and also used them to inform larger government programmes about water resources and ecosystem services.

CASE STUDY 3

THINK ABOUT THE EXPERTISE WITHIN THE RESEARCH TEAM AND PLAN ACCORDINGLY

Projects that have interdisciplinary research teams including social scientists are often better equipped to design effective stakeholder engagement processes. Depending on the extent and nature of the stakeholder engagement to be done, it may be worthwhile including people with good facilitation experience on the research team to oversee the engagement process. For example, if there is a high level of conflict to be negotiated during engagement, a professional facilitator may help achieve the best results and avoid negative outcomes.

Researchers on the FP7 MOTIVE project successfully engaged stakeholders in the production of models for adaptive forest management by working from stakeholder engagement guidelines produced by an experienced social scientist as part of a dedicated work package on 'stakeholder interactions and decision making'. Each of the ten partner countries carried out stakeholder analyses and wrote engagement plans based on the guidelines, without necessarily having a great deal of prior experience in stakeholder engagement. The engagement aspects of the project were monitored by the social scientist, who ensured that a broadly consistent approach was maintained across countries.

3.2. Communicating appropriately and diversely.

3.2.1. Communication method matched to the level of engagement

A second and essential consideration of research uptake and pathway to impact is the translation of research work into dissemination outputs that would be suitable in fostering engagement. In some cases, it is likely that the research project has not been completed and/or that its findings have not been refereed. This would require the research team to maintain some circumspection when communicating externally, particularly when the research is funded and likely subject to restrictions on circulation prior to validation or due to ethical/confidentiality considerations.

A crucial perspective to this theme is the development of a communication strategy that is specifically aimed at specific audiences and stakeholders rather than relying on the media. In effect, the stakeholder identification, analysis, and mapping exercise discussed earlier need to be underpinned, or followed, by the appropriate communication of research insights. The specific settings for communication can be as follows:

i. Informal contacts established through mutual professional or personal networks.
ii. One-on-one meetings with key actors or decision-makers.
iii. Formal knowledge exchange groups (including steering groups, advisory panels, and multi-stakeholder forums) at local, sectoral, or national levels.
iv. Workshops groups and other types of meetings, including social events.
v. Public/official hearings (often invited after making formal submissions or responding to consultations) and town hall meetings.
vi. Stakeholder-led workshops or conferences focusing on relevant issues linked to the research.
vii. Talks and lectures, such as those in those in relation to continuous professional development (CPD).
viii. Practical demonstrations, including participatory events (e.g., training).
ix. Field or laboratory visits (e.g., ‘open days’) to facilitate shared dialogue and understanding of study sites or research processes.

There are also research activities that may indirectly enable the communication of research insights, namely:

i. Involving citizens in monitoring (e.g., using smartphone applications).
ii. Participatory mapping enabling researchers and participants to co-input data, map focal areas and integrate scientific and local knowledge.
iii. Participatory photography (photo surveying) enabling participants to monitor, communicate or discuss locations and issues of importance.
iv. Focus groups, questionnaire/surveys and interview methods.

In designing the communication media, one needs to consider the possible expectations and outcomes to be fulfilled. For example, the methods can be colour-coded according to the 'level' of engagement (**Inform** – the most basic level of engagement; **Consult** – specific questions are asked but not full discussion or interaction; **Involve** – more opportunity for discussion; **Collaborate** – fully involved, and to some extent including decision making). Table 5 maps the intended objective of the engagement with the type of event, which then guides towards the form of the communication to be considered by the research team.

Table 5 - Matching communication/media to the expected level of engagement

Communication settings	**Inform**	**Consult**	**Involve**	**Collaborate**
Website	**	**	*	*
Social media	**	**	*	*
Lectures and talks	**	*	*	*
Continuous professional development and training	**	*	*	
Multi-stakeholder forums		*	**	*
One-to-one meetings	*	*	**	*
Town Hall meeting or public/official hearing	*		**	*
Workshops	*		**	**
Surveys, questionnaire, focus groups and interview	*		*	*
Participatory mapping and photography, citizen monitoring			**	**
Practical demonstrations			**	**
Steering group				**
***most appropriate level of engagement for a given method* **other levels for which the methods*				

Methods of engagement can be considered in terms of the level of engagement they are most appropriate for. For example, stakeholder specific publications provided on a website or in newsletter are most likely to be used to inform, and a workshop could be used to steer involvement or collaborative engagements.

Table 6 provides an example of how methods can be selected for a project based on the level of engagement required. Most projects will involve various levels of engagement and more than one method for each level of engagement is required. Each stakeholder does not have to be engaged in every activity at the level of engagement they are associated with.

Table 6 - An illustration matching methods to the expected level of engagement

Level of engagement →	Inform		Consult	Involve		Collab-orate
Method of engagement → / Stakeholders ↓	Website	Newsletters	Focus Groups	Work-shop	One-to-one meeting	Steering Group
Govt advisors		X		X	X	X
Landowners		X	X	X	X	
Tenants		X	X	X		
Media	X	X	X			

3.2.2 Policy brief guidelines.

Underlying many of these communication engagements is the need to provide content that is appropriate to the circumstances and audience. For example, while detailed methodological procedures pertaining to a research project are essential for academic reviewers and technical experts, they are less crucial when communicating to other audiences. In a similar vein, a multitude of tables showing statistical results can attest to the thoroughness of the findings, but it can also have a 'crowding out' effect and confuse a wider audience. At the same time, it would be very challenging and time-consuming for a research team to continuously write different versions for each audience.

Hence, one needs to strike a balance, potentially bearing in mind three versions (i) a press release version, (ii) a 'popular' version that is more detailed than a press release but still aimed at a wide audience, and finally a 'policy brief' (a document aimed at decision-makers and policymakers, such as board of directors, regulators, civil servants). The guidelines set out in Figure 3 are not strictly speaking about 'how' to write a policy brief but do highlight the key questions to be answered when drafting one. The guidelines are inevitably generic in nature and other specific guidance may apply. For example, for public

hearings or consultations, it is likely that you will have to follow the template and set of questions devised by someone else and attempt to position your research-informed views and evidence within the set template.

Figure 3 - Policy Brief Guidelines: Key questions
1. *Will the readers be technical or policy experts?* Are you targeting people within specific government agencies, who are likely to have a relatively focused interest in the topic, with a relatively high degree of technical competence? If so, you will need to include some of the technical detail, so that these specialists can make up their minds about the credibility of your work. If you are briefing policy analysts within government departments who advise Ministers, or MPs and Ministers themselves, your policy brief should be shorter (one or two sides), with far less technical detail and much simpler language. In general, you need to avoid academic jargon and acronyms (if you must, spell them out).
2. *When is your target audience likely to read the policy brief?* This will help you to determine when, how and in what format to distribute the brief. For example, will an electronic or paper version best suit your audience? If you are sending the policy brief by email, when should you schedule for this email to be sent – e.g., evening, morning, or the weekend?
3. How much time does your target audience have? If your audience is a high-ranking politician, the brief should be short (1 page only). Others might spend up to 30-60 min to get a more detailed understanding of the research underpinning the policy brief. One approach is to do a 'breakfast test' i.e., a brief should be read and understood in the length of time it takes to drink a coffee over breakfast.
4. Why should your target audience take interest in your policy brief? What is likely to grab your audience's attention? How can you make your brief visually attractive? You should also consider using a heading that is relevant to your audience's area of interest. What 'tagline' or 'teaser', perhaps based on a key finding, might encourage a politician/specialist to read it?
5. *What are the most pressing policy issues?* You should strive to position your policy brief to important and current policy questions and issues. If your work is only one small contribution to a wider issue, you could perhaps collaborate with other researchers working in the same area to create a policy brief that includes your research. Also, is it likely to be perceived as having major political significance? if there are other major issues at stake, you need to ask yourself whether it is the right time to put out your policy brief.

6. *Is your policy brief compatible with your audience's ideology and goals?* It is inevitable that many policy actors are looking for research that furthers their agenda and legitimatises their views and ideology. They are unlikely to change their fundamental values and beliefs based on one policy brief, so make sure you phrase your recommendation(s) carefully so that they do not instantly provoke a negative reaction based on a presumption of ideological incompatibility. This does not mean you need to make political recommendations or change your findings to fit the views of politicians. You need to find creative, innovative, and intelligent ways to adapt how you communicate your findings to make them attractive to different policy actors without altering the research in any way.
7. *Does your audience have the power to make decisions?* It is important to understand whether your target audience have the power to adopt the desired recommendations. An understanding of what they are able or unable to implement would be useful. It might still be possible to tailor a policy brief to suit what you feel the current audience is empowered to do.
8. *What is your profile and reputation?* A policymaker often needs re-assurance that you are knowledgeable and credible enough to deliver the message. If you do not have a high profile yourself, you may bring forward or emphasise other indicators of esteem, such as your institutional affiliation, the 'badge' of your research funder or a more senior academic mentor who co-authors the policy brief with you. Within reason, the existence of a team of academics with appropriate credentials reinforces the credibility of the research and may help bring different strengths.
9. Are your recommendations/solutions relevant to the challenge? It is important to be apprised of the policy problem(s) the policymaker is tasked to address. You need to ensure the evidence you provide in the policy brief is aligned with the policy problem. If you do have the solutions, you need to ensure your recommendations are expressed in a 'SMART' (specific, Measurable, achievable, relevant, timely) way.

There are many examples of a generic policy brief layout[7]. In most institutions, you will be able to rely on policy advisors as well as media/press office to help you with visual design, selection of photos, and wording. To make an impression, visual representations (graphs, infographics, pictures, charts) are very important. Furthermore, a key test is to seek feedback from a non-academic reader. If he/she cannot understand your message, then you should consider re-writing the brief. Lastly,

[7] For example, refer to:
https://www.idrc.ca/en/funding/resources-idrc-grantees/how-write-policy-brief
https://www.researchtoaction.org/wp-content/uploads/2014/10/PBWeekLauraFCfinal.pdf

if you want to get your message across, avoid dictatorial expression (e.g., telling policymakers they 'must' and "have to" change policy). If anything, you want to write your recommendations in a way that shows that your recommendations exist among other options based on research that may be similar or different to your own. Remember, you aim to persuade and influence rather than merely dictate.

3.3. Capacity Building of producers and users.

A crucial challenge that is perpetuating the 'practice-research' gap in Africa (and beyond) is the absence of resources and knowhow to support research uptake.

Firstly, from the institutional and research team perspective (i.e., producers or suppliers), the development of knowledge and skills around stakeholder engagement, methods of dissemination and communication and reflecting on pathways to impact has not been a priority. The only exceptions would be iin the case of funded research projects in key disciplines (e.g., heath) where grant agencies would have been inherently attuned to these aspects and would have been keen to know about the capacity of the research team to deliver on engagement, communication, and impact. For most of the academic research community, the assumption was such skills and knowhow would be developing organically with experience and mentoring. Unfortunately, such an approach potentially works for a minority of academics and arguably it takes many years for such capacity to be emerging. Furthermore, it is not always the case that such skills can be easily transmitted through mentoring and support from more senior/established researchers to the junior ones. Therefore, developing an institutional strategy for staff development, besides focusing on teaching and research skills, should focus on providing the training tools for uptake and impact. Some of the following examples reflect key topics and agenda of capacity building:

(a) Public Engagement 101

Effective public engagement with research can be a viable route to generating research impact. This course will introduce you to public engagement with research and why it's important. It will highlight different methods of engagement, how to identify your target audience and how best to engage them. This session is aimed at academic, research and professional services staff at all levels and postgraduate research students.

(b) Introduction to Overton

Overton is the world's largest searchable policy database, which tracks everything from white papers to think tank policy briefs to national clinical guidelines, and automatically finds the references to your scholarly research, academics and other outputs. It looks for the names of any researchers on expert panels, who are quoted in policy documents, who give evidence to committee hearings and more. Importantly it can also find the links between policy documents – often research is picked up by intermediaries like think

tanks and agencies – giving you unparalleled insight into the dynamics of policymaking. This session will introduce you to Overton, and how to use it to track the impact of your own research on policy. This session is aimed at academic and research staff at all levels.

(c) Impact Culture

In this online workshop, you will discover how you can transform your working environment and create a culture you can belong in. You will be able to discuss practical ideas and creative ways of thinking to re-motivate and inspire you, building on what works and adapting what doesn't, to create a healthy impact culture with your closest colleagues.

(d) Storytelling for Policy[8]

Researchers often reflect that it is difficult to explain their research to policymakers. Policymakers are busy and are rarely experts, lacking the context, deep background or technical expertise related to research. Storytelling techniques are used by journalists and policymakers themselves to help simplify complexity, grab attention, and communicate information. This training is aimed at researchers at all levels who want to influence policymakers and are keen to improve their communication skills to make their engagement as impactful as possible. The training explores storytelling techniques in general and can be applied to written work as well as interviews or public speaking.

These examples reflect a blend of 'soft' as well as 'hard' competences that an institution could deliver for its academic and research-related staff[9]. An important consideration for research uptake is not to limit training to a few, and possibly already uptake-savvy teams/individuals within an institution, but to foster a broader organisational culture around involving stakeholders, dissemination of research to non-academic audience, and the consideration of how one's research could contribute to societal and economic impact – beyond the obvious academic-led impact (through education and traditional research indicators of esteem). Consider for instance the University of Glasgow's and the University of Essex's training and guidance scheme with regards to impact (https://www.gla.ac.uk/myglasgow/ris/researchimpact/trainingandsupport/ and https://www.essex.ac.uk/staff/research-impact/impact-academy).

[8] Further example on storytelling - https://paulcairney.wordpress.com/2016/11/01/storytelling-for-policy-change-promise-and-problems/ and other capacity building examples at https://www.fasttrackimpact.com/training-courses

[9] Legal aspects underpinning these arrangements are also quite important: https://www.gov.uk/government/publications/university-and-business-collaboration-agreements-model-agreement-guidance/university-and-business-collaboration-agreements-model-agreement-guidance

In parallel, this capacity building exercise must be accompanied by an institution-wide review of strategic priorities, workload allocation and academic incentive systems to ensure there is a feasible implementation of uptake on the ground. These guidelines thus place an emphasis on ensuring academics are explicitly given the time and effort to capacity build and engage with uptake (and be made accountable for it), rather than merely expect them to consider uptake as an optional 'hobby-like' practice. National higher education and research agencies could also develop funding schemes to finance institutional research uptake and impact activities, at least at the kickstart stage.

Secondly, from a user perspective, there is also a need to build the capacity of external stakeholders (companies, government agencies, community leaders, beneficiaries) so that they can appreciate the opportunities (and limits) of research projects and are able to meaningfully contribute during stakeholder engagement, research uptake and impact. There are potentially two levels/dimensions for the capacity building of users:

(a) At the individual research project level, the identified stakeholders are formally apprised of the implications of the research, expectations regarding data collection, application of research ethics, findings, likely benefits and how stakeholders could intervene or influence. This is arguably a very instrumental approach towards ensuring the completion of the research but if properly executed and welcome, it ensures stakeholders become more familiar with the research process, and it future-proofs engagement with the stakeholders. An example of resources available to decision-makers to help them engage with research evidence is provided by the African Institute for Development Policy (AFIDEP). AFIDEP is an African-led, regional non-profit research policy institute established in 2010 to help bridge the gaps between research, policy and practice in development efforts in Africa[10].

(b) At the institution-to-institution, and on a more strategic, level, research open days aimed at existing and potential external organisations can help bridge the gap between practitioners/policymakers and researchers. This can spur co-development and co-production of research proposals. Based on national models, some universities have also established a **chief scientific advisor** role or similar committee to support decisions and strategies in local or regional governments. In effect, the chief scientific advisor ensures that the organisation's senior management is sensitised with a view to facilitate the dissemination and understanding of research outcomes, but also to foster the development of appropriate research questions back to the university and research teams.

[10] https://www.afidep.org/. Detailed training materials are available on the site.

In conclusion, the capacity building of both users and producers is crucial in effectively tackling the common 'ivory tower' characterisation of universities. It requires training/development schemes that can provide instrumental and practical skills/knowledge on uptake, but at the same time, there is a need to inculcate a wider culture amongst institutions and users.

3.4. Monitoring, evaluation and learning - the pathway to impact.

3.4.1. Defining impact

The last aspect of research uptake and impact is the establishment of a monitoring, evaluation and learning mechanism to ensure there is a demonstrable pathway to impact that is backed by evidence, which (i) ensures accountability and (ii) provides opportunities for learning and reflection. To recap, impact can be classified as *instrumental* (influencing [policy and practice development, changing legislation and behaviour), *conceptual* (reframing or re-orienting debates and identifying areas for policy) and c*apacity building* (introducing or revising knowledge and skills through training or other forms of professional development).

In all cases, impact can be conceptualised in terms of the extent of its 'reach'; defined as the sphere of control, sphere of influence and sphere of interest. In the first instance, a given activity (for example dissemination event for a research article) may lead to an output (e.g., x number of external stakeholders attended the event). However, there is not yet 'impact' per se. A possible route may be that an attendee to the event seeks to apply the research insights/recommendations within their own organisation and seeks the researcher's inputs/advice in embedding change within the organisation. One thus enters the sphere of influence with the possible outcome that an organisation will be changing or reviewing its policies and practices. While commendable, the last sphere (sphere) of interest is typically concerned with the benefit (societal or economic impact) generated from the review or change, which can take a relatively long time to materialise. In this example, the researcher's own direct inputs may be less present over time leaving others (intermediaries) to take the change forward.

As hinted above, the most common approach to designing and planning impact is the use of the logical framework (Log Frame) and the theory of change. A log frame is a matrix which illustrates the key inputs/activities, outputs of activities, outcomes (or early-stage impact) and (long-tern) impact for the programme in the form of a table[11]. As such, it provides an overall summary of the programme in a single diagram and needs to reflect the programme's theory of change. Relatedly, there is an expectation that appropriate evaluations of progress or

[11] https://beamexchange.org/guidance/monitoring-overview/theory-systemic-change/logframe-theory-change/

impact are made, by relying on metrics and other qualitative assessments. However, a log frame and planned theory of change, supported by agreed metrics, can become a very rigid mechanism of accountability (monitoring and evaluation) which disregards changes in the environment and assumptions made at the beginning of the project design. Therefore, the 'learning' part of the model recognises the need to acknowledge changes in these assumptions and 'flex' the plan accordingly so that the research impact can take on board new information. Without the learning phase, a monitoring and evaluation agenda can be quite problematic as actors seek to give an 'impression of compliance' rather than recognise the realities on the ground.

3.4.2. Impact planning guidelines

The impact planning guidelines below are an extension and supplement to the impact planning guidelines contained in the 'Impact by Design' document. Therefore, both sets of guidelines should be read in conjunction. Firstly, your impact summary is meant to answer two questions:

- Who might benefit from this research?
- How might they benefit from this research?

To answer these questions, you need to: i) articulate impact goals (not dissemination or knowledge exchange goals – that's part of your pathway to impact); and ii) list (and group) your publics and/or stakeholders[12].

Figure 4 – How to identify your research impact goals?

Start by thinking clearly about the types of benefit(s) you want your research to produce, making your benefit(s) as specific, measurable, achievable, realistic and time-bound (SMART) as possible. Here are some guidelines to help you:

- Visualise yourself at the end of your project having achieved your impact objectives. What has **changed** as a result of your research? What are people saying about **how** they have benefited from your research? For example, have they changed their working practices? Have relevant metrics improved? Have regulations been reviewed? For example, a decline in production time, faster processes, reduction in carbon emissions? At the same time, consider intermediate outcomes e.g., review of production schedules, carrying out a process analysis and tracking of carbon emissions, change in regulation and rules relating to the production process.

[12] In 2015, the Higher Education Funding Council for England (HEFCE) published a searchable database of impact case studies. The following were the most commonly cited impact pathways: publications, advisory roles, media coverage, partnerships and collaborations with industry and NGOs, accessible online materials.

- Ensure that you are **not** confusing impact goals with disseminating and communicating your research findings. You can follow up any generic presentation with interested participants which might open opportunities for impact.

- If, however, you are struggling to distinguish research communication from research impact, ask yourself **who is most likely** to be interested in your work outside of the academic community? And how are those who hear about your work likely to benefit from or use what they learn? Consider the stakeholder mapping exercise explained earlier.

- If you don't know the answer to these questions, focus on trying to identify the aspects of your work that you think people outside academic community are most likely to find interested. **These may refer to research methods and techniques rather than findings per se (e.g. data analytics and mapping)**. Then, ask yourself why you think they might be interested in this aspect of the work.

- It is possible that even after this you may still be struggling to clearly articulate your impact goals. If so, consider speaking to some of the people you think might be interested in your research, and ask them what interests them most? What might make your research more interesting/relevant to them? And how they would like to benefit from or use your research? It would be useful to attend **practitioner-led events and conferences** to network further.

If at this stage you still have a goal that is only about communicating your research rather than impact, then you might have a good idea of the sorts of modes of communication you want to use (e.g., social media, film). In this case, you can work back from the communication method you're interested in using, to the people who will engage with that method, and then their interests and how they will benefit. However, beware that in some cases you may discover that the communication method you want to use will not reach the people who are interested or can use your work (for this reason it is always best to start with the goal and/or your publics/stakeholders before choosing your pathways to impact).

Finally, the Impact Template (see Impact by Design document) is a structured method of linking impact goals to publics/stakeholders, research findings and pathways to impact. If you find it challenging to start with impact goals, try identifying your publics/stakeholders and what they might be interested in, and then work back from there to your goals. Engaging with stakeholders directly

(i.e., what are their more salient challenges; what is hindering their progress?) may gradually bring areas of collaboration.

3.4.3. Impact pathways guidelines (The experience from the UK REF)

The following guidelines are drawn from an analysis of 'impact pathways' in grant applications that led to the top-scoring 'impact case studies' in the UK assessment of research excellence and impact (REF2014). The analysis was conducted by Sarah Buckmaster and Mark Reed. They contacted researchers whose impact case studies[13] scored the highest grade (4*) during REF2014, and asked them to share their impact pathways. They studied the most successful impact case studies from a wide range of disciplinary areas and identified common elements in the impact pathways of these impact case studies.

[13] Some examples of cases linked below

Case study | Young people's sexual health: Impact on policy and service provision.

Case study | New approaches to addressing sexual health and sex education.

Case study | Preventing HIV in African adolescents.

Case study | Raising awareness of adolescent health communication.

Case study | Supporting young people's sexual wellbeing.

Case study | Influencing public debate and government policies on adolescent sexual health.

Figure 5 – Case Study Examples

CASE STUDY 4 – UK Research Councils' Pathway to Impact

According to the UK Research Councils Joint Electronic Submission Handbook, every impact pathway should have the following four elements:

- Activities that actively engage relevant stakeholders/publics;
- Activities that meet their needs, interests and priorities;
- A clear plan (including "timing, personnel, skills, budget, deliverables and feasibility"; and
- Your track record with stakeholder/public engagement and impact.

In all of UK highly-rated case studies, the impact planning demonstrated a strong connection between the overall research vision, strategic objectives, outputs and impact. The take-home message is to make sure there is a strong narrative – a thread running through the whole programme of work. Illustrating this in some way can be helpful to get your team on board and see how everything fits into the bigger research picture.

This might seem like an obvious point, however, when comparing successful impact pathways and those with a poor rating, you appreciate the importance of being **SPECIFIC**. Time and energy should be put into providing detailed impact information in three categories: 'publics and stakeholders', 'methods' and 'dates, and 'phases'. For example, spell out exactly who you will work with (not just government, or a particular department, but the specific policy team and if possible, the name of your contact in that team). Similarly, specify your impact goals clearly, with specific indicators that will tell you when each goal has been achieved. Explain how you will complete each activity in detail and why this is the best way (pathway) of achieving a specific impact (e.g., instead of saying social media, identify the specific platform you will use, who you will target on that platform, and what impact goals you will be able to preferentially achieve via this medium.) Once your research is underway, it is a good practice to track your impact progress.

All the successful REF impact case studies identified very specific target publics and stakeholders. It is not necessary to cover a wide breadth of people and organisations but demonstrating you have carried out an audience (publics and stakeholders) analysis and will be targeting the most relevant groups or individuals makes your impact more targeted and more likely to be successful. Some detailed plans even list individual names and numbers of individuals within certain target groups.

Now that you have detailed who you are targeting with your research impact, the methods of how you will achieve this need to be just as detailed. For example, if you've identified fifteen gender activists as your target audience for impact, you then need to detail exactly how you will engage with them. Here is a good place to draw on specific team members that have existing relationships.

CASE STUDY 5: UK Impact – The approach

All of the impact pathways that achieved great results (and high ratings) followed logical phases when planning impact. Your plan must be logical in terms of when and where you are planning impact. For instance, impact pathways for one of the 4* impact case studies were implemented across specific geographical areas during certain periods. Others divided their impact into clear thematic areas. Whichever way they did it, the successful impact pathways had clear 'phases of impact'.

It is essential to tailor impact links to the specificity and your target publics, as discussed above. A 3* impact pathway discussed holding meetings and producing policy briefs. A 4* impact pathway detailed what type of meetings (one-on-one, small group, online, in-person), where meetings would be held, and who would attend – and they did this for each target public and stakeholder showing that their events were tailor-made for each target group. They detailed the themes and subjects of policy briefings and listed the specific team or individual it would be sent to. You need to take the time to identify and understand your publics and stakeholders before you can do this.

Although impact pathways were specific, they also built-in flexibility. However, they all demonstrated that having a flexible plan does not mean it has to be evasive. You can still be specific within certain phases of the research, for example collecting evidence in the early stages of the research, and then building knowledge exchange and impact around that evidence as it arises. One impact plan stated, "These activities will be tailored to the stakeholders' needs and requirements and will build on evidence collected in earlier parts 2 and 3 of the study".

Where possible, collect evidence of growing public interest in the issues you are studying (e.g., numbers of people attending public engagement events or watching programmes linked to your subject, do a needs analysis). Demonstrate that stakeholders want/need your work, and if possible, co-develop your impact pathway (and in some cases the whole project) in collaboration with them. Establish an advisory panel (there is peer-reviewed evidence that these lead to impact more than many other impact pathways). Rather than trying to avoid mentioning any sensitive issues, highlight them to demonstrate the background research (e.g., needs analysis) and other groundwork you have carried out. Mention ethics protocols that will be followed and organisations you will work with to ensure you communicate sensitively with vulnerable groups.

You need to talk about your track record in achieving impact and issues linked to your proposal. It is difficult to "prove" that you will be able to do what you are suggesting you will do, and some of the best evidence you have is a track record of having delivered impacts for the publics and stakeholders in the past. If you don't have a track record yourself, consider bringing someone into your team who does and get them to work with you on your impact pathway.

CASE STUDY 6: UK Impact – The approach (continued)

It is important to have a plan for evaluating whether or not you are moving towards or away from impact, which will inform you when you have achieved your goals. The process of identifying indicators will help you identify clearer and more credible impact goals. Thinking in detail about how you will know if you have achieved impact will often identify risks and challenges that you can prepare for, making your plan even more credible. You can also build in any costs of monitoring and evaluating impact into your proposal. This can illustrate how seriously you are taking impact and adds credibility to your claim that these activities will happen.

Some directed calls for proposals from Research Councils (in the UK) in the past have suggested approximately 10% of the total budget should go to supporting 'Pathways to Impact'. Researchers typically put in significantly less than this, fearing negative feedback from reviewers on their "value for money", but anything between 5% and 10% would be reasonable.

Don't rely on academic reviewers to provide feedback on the impact sections of your proposal. Instead, seek feedback from someone in your organisation who specialises in impact, or if possible, get feedback on your impact sections from someone who works with the public or stakeholders you want to benefit.

Demonstrate how you are thinking long-term with regards to impact. What will happen at the end of your funded research? Can you describe how what you are putting in place is self-perpetuating? Or that you will inspire a group of people who will then manage a process or output?

Overall, the pathway to impact involves a key focus on certain types of dissemination that are more likely to achieve impact (e.g. publications, online resources, press releases and presentations). But it is just as important to invest in longer-term relationships with the policy community and key players who have the time, resources, and expertise to help you form those relationships and amplify your message. In the long-term, this may open opportunities to contribute to advisory committees and other processes that directly feed into the policy process, and in turn help to generate further impact.

4. Conclusions

The guidelines and proposed framework set out the institutional and academic elements required to advance the research uptake and pathway to impact agenda. Admittedly, alongside the current efforts to foster research outputs and innovation in Africa, developing an uptake and impact agenda is a tall order and

can be locally perceived as ‘additional workload with very speculative or unclear outcomes’. Therefore, resources (support and financial) need to be set aside to ensure the development of a coherent, authentic and in-depth research uptake and impact strategy at the national and institutional level. In this context, the involvement of research producers, ‘intermediaries’ and users is critical to ensure the assumptions, drivers and barriers can be identified and addressed where possible.

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More Online Resources

- Biodiversa Stakeholder Engagement Handbook
- Association for Project Management - stakeholder engagement resources
- Simply Stakeholders – stakeholder engagement (best practice guide)
- Stakeholder Mapping – stakeholder management
- Society of Practitioners of Health Impact Assessment - stakeholder engagement tools and materials
- Bigger Investing – 15 books on stakeholder management